REMARKS

Claims 26, 27, 29, 30, 32-46, 48-55 and 57-92 are pending in the Application. Claims 67, 72, 76, 74, 77, 78, 81, 82, 85 and 86-89 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Patent No. 6,604,580 and U.S. Patent No. 6,688,388. Claims 40, 42-45 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith (U.S. Patent No. 5,435,400) in view of Stanley (U.S. Patent No. 5,411,104). Claims 40, 41, 46-48, 50 and 61 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mueller et al. (U.S. Patent No. 5,355,967) in view of Stanley. Claims 40, 42, 43, 51 and 52 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Allen (U.S. Patent No. 4,134,463) in view of Stanley. Claims 26-27, 29-30, 32-39, 53-55, 57-60, 62-73, 75, 79, 83 and 90-92 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Stanley. Claims 74, 77-78, 81-82, and 85 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Stanley as applied to claims 26, 35, and 54 above, and further in view of Murray (U.S. Patent No. 5,785,133). Claims 26, 35, 76, 54, 80 and 84 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanley in view of Campbell (U.S. Patent No. 3,534,822). Claims 86-88 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanley in view of Murray (U.S. Patent No. 5,785,133) and Campbell (U.S. Patent No. 3,534,822). Applicant respectfully requests reconsideration of the Application in view of the amendments and remarks herein.

Double Patenting

Claims 67, 72, 76, 74, 77, 78, 81, 82, 85 and 86-89 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Patent No. 6,604,580 and U.S. Patent No. 6,688,388. While Applicants dispute that claims 67, 72, 76, 74, 77, 78, 81, 82, 85 and 86-89 are not patentably distinct from the claims of U.S. Patent No. 6,604,580 and U.S. Patent No. 6,688,388, in the interests of expediting prosecution, a terminal disclaimer is submitted herewith. Accordingly, Applicants respectfully request

withdrawal of the obviousness-type double patenting rejections to claims 67, , 72, 76, 74, 77, 78, 81, 82, 85 and 86-89.

Claim Rejections – 35 U.S.C. § 103(a)

Smith in view of Stanley

Claims 40, 42-45 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Stanley. Claims 26-27, 29-30, 32-39, 53-55, 57-60, 62-73, 75, 79, 83 and 90-92 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Stanley. Claims 74, 77-78, 81-82, and 85 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Stanley as applied to claims 26, 35, and 54 above, and further in view of Murray (U.S. Patent No. 5,785,133).

Applicant respectfully traverses these rejections for at least the following reasons.

In reply to Applicant's previous response against the combination of Smith with Stanley, it is again argued that it is overbalanced drilling, not drilling with liquid, which causes the problems noted by Stanley. According to the argument, Stanley provides a motivation to apply the liquid underbalanced drilling system of Smith to drilling in coal. Applicants respectfully submit, however, that such an argument wrongly ignores Stanley's strong teaching against the use of liquid drilling fluid when drilling coal seams. MPEP § 2141.03 IV states "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)." For example, Stanley teaches: (1) that using a liquid drilling system damages the near wellbore area; (col. 3, lines 30-35); (2) all of the limited number of mud-drilled horizontal coalbed methane wells attempted in the San Juan basin were economic failures (col. 3, lines 50-53); (3) lateral holes drilled using gas-driven drilling motors will have a higher flow capacity than liquid-drilled wells due to reduction or elimination of near wellbore damage (col. 4, lines 34-46); (4) gas drilling avoids formation of a mudcake on borehole walls (col. 6, lines 10-12); and (5) liquid based drilling can reduce formation permeability as non-native water can cause clays to swell in clay and, with oil base muds, the coal itself will swell (col. 6, lines 15-22). While some of these disadvantages may be partially attributable to drilling overbalanced, as argued in the rejection, they are also

attributable, if not primarily attributable, to drilling with liquid. Thus, taken as a whole, Stanley teaches away from combination with the liquid underbalanced drilling system Smith.

Accordingly, for at least this reason, Applicants respectfully request withdrawal of the rejections to claims 26-27, 29-30, 32-39, 40, 42-45, 49, 26-27, 29-30, 32-39, 53-55, 57-60, 62-73, 75, 79, 83 and 90-92 under 35 U.S.C. § 103(a).

Mueller in view of Stanley

Claims 40, 41, 46-48, 50 and 61 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Mueller et al. in view of Stanley. Like Smith, Mueller is cited as teaching an underbalanced drilling system that uses liquid. Taken as a whole, Stanley teaches away from the use of liquid drilling fluid when drilling coal seams; and therefore, teaches away from combination with Mueller. Accordingly, for at least this reason, Applicants respectfully request withdrawal of the rejections to claims 40, 41, 46-48, 50 and 61 under 35 U.S.C. § 103(a).

Allen in view of Stanley

Claims 40, 42, 43, 51 and 52 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Allen in view of Stanley. Like Smith, Allen is cited as teaching an underbalanced drilling system that uses liquid. Taken as a whole, Stanley teaches away from the use of liquid drilling fluid when drilling coal seams; and therefore, teaches away from combination with Allen. Accordingly, for at least this reason, Applicants respectfully request withdrawal of the rejections to claims 40, 42, 43, 51 and 52 under 35 U.S.C. § 103(a).

Stanley in view of Campbell

Claims 26, 35, 76, 54, 80 and 84 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanley in view of Campbell. Claims 86-88 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanley in view of Murray and Campbell. Campbell is cited as teaching an underbalanced drilling system that uses liquid foam. Stanley teaches away from the use of liquid drilling fluid when drilling coal seams; and therefore, teaches away from combination with Allen. Accordingly, for at least this reason, Applicants respectfully request withdrawal of the rejections to claims 26, 35, 76, 54, 80 and 84 under 35 U.S.C. § 103(a).

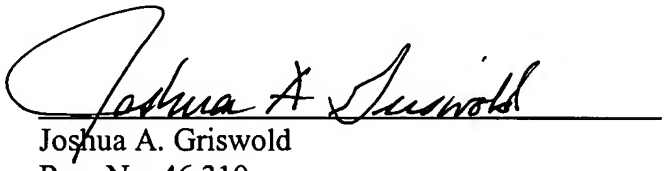
Conclusion

For at least the reasons discussed above, Applicant respectfully submits that the claims are in condition for allowance, and requests such a Notice. If the present Application is not allowed and/or if one or more of the rejections is maintained or made final, Applicant hereby requests a telephone conference with the Examiner and further requests that the Examiner contact the undersigned attorney to schedule a telephone conference.

This Amendment is being filed simultaneously with a Request for Continued Examination. Enclosed is our checks in the amount of $790.00 for the Request for Continued Examination fee, $130.00 for the terminal disclaimer, and $450 for a two month extension. Please apply any deficiencies or any other required fees or any credits to deposit account 06-1050, referencing the attorney docket number shown above.

Respectfully submitted,

Date: 8-21-06



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